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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/596,418

09/01/2006

Rainer Mueller

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EXAMINER

O'HARA, BRIAN M

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/596,418	Applicant(s) MUELLER ET AL.	
	Examiner Brian M. O'Hara	Art Unit 3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08/07/2009 and call by applicant.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. The office action of 09/28/2009 has been replaced by the instant office action. Applicant's arguments, made in a phone call to Mike Mansen, with respect to the use of prior art reference Movesian et al. (US Patent 7,083,147 B2) have been fully considered and are persuasive. The Movesian et al. reference does not meet the priority date of the current application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-4, 7, and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wulliman et al. (US Patent 6,627,561 B1) in view of Cota (US 6,177,157 B1).** Regarding independent claim 1, Wulliman et al. discloses an insulation structure for an internal insulation of a vehicle, for arrangement in an intermediate space between an internal paneling (70) of the vehicle and an outside skin (66) of the vehicle, the insulation structure comprising: an insulation package (40) arranged in the intermediate space (See Fig. 14) between the internal paneling (70) of the vehicle and the outside skin (66) of the vehicle; an insulation core (42) embedded in the insulation package; and an outer film (24, or 44 and 46), the outer film having a film envelope (portion containing 42) and two hose-like end sections (Fig. 10 shows four hose like end

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sections; Fig. 11 shows two hose like end sections where 44 and 46 meet to the left and right of 42) formed at opposite ends of the film envelope (left and right sides of package 40 shown in Fig. 11), each of the two hose-like end sections being outside of the film envelope and on opposite outer edges of the outer film (as shown in Fig. 11), respectively, and extending beyond an outer periphery of the insulation package,

4. However, Wulliman et al. does not disclose folding the hose-like end section into a Z-shape. Cota teaches an insulation package (thermal shields insulate spacecraft from aerodynamic heating) comprising hose-like end sections (140) forming a flat Z-fold attachment section (See Fig. 4), having film fold regions laid on top of each other (158 and 170 are laid on top of the lower portions). At the time of invention, it would have been obvious to one of ordinary skill in the art to provide the hose like end sections of Wulliman et al. with a flat Z-fold attachment section as taught by Cota. The motivation for doing so would have been to create a seal between the outside of the insulation package and the insulation core.

5. Applicant may argue that Fig. 4 of Cota shows an S-fold, however it should be noted that an S-fold is simply the opposite of a Z-fold. As shown in Fig. 2, element 40 on the right side shows an S-fold which is the same structure on the left side of Fig. 2 which comprises a Z-fold. The same would be true for the structure shown in Fig. 4, i.e. element 140 would have a complementary Z-fold on the left side of a complete cross sectional view. Additionally, Element 140 is **flat** on the top and bottom, thus making the fold flat. Finally, it may be argued that a Z-fold has sharp edges at the folds, which are

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different from the Cota reference. **Any** fold will inherently have some curvature at the folds, so the structure of Cota meets the claim of a Z-fold.

6. Regarding claims 2-4 and 7, Wulliman et al. teaches an insulation structure (40) including: a film made of material of high and permanent fire resistance (22); a film reinforcement region (24) directed toward the outside skin of the vehicle; with an inner film (See 24 and 28 in Fig. 7); forming a fire barrier (See Table in Columns 13 and 14).

7. Regarding claims 11-17, the use of a plurality of layers as taught by Wulliman et al. (See 24 and 28 in Fig. 7) combined with the insulation structure and shape of Cota would inherently result in an inner film which would take on the shape of the outer film as taught by Cota; including the opposite hose-like end sections, Z-fold attachment sections, complete enveloping of the insulation package, continuous attachment sections being attached to continuous insulation packages (as shown below element 68 in Wulliman et al.), burn through safe (See Table in Columns 13 and 14 of Wulliman et al.).

8. **Claims 8-10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wulliman et al. and Cota as applied to claim 1 above, and further in view of Sanocki et al. (US Patent 5,759,659 A).** Wulliman et al. and Cota disclose the insulation structure as described above, but do not disclose the use of ceramic fibers. Sanocki et al. discloses using ceramic fibers as part of the fire barrier's high temperature-resistant layer (16). Sanocki et al. also discloses a through hole (20) for connecting the insulation structure to a vehicle. At the time of invention, it would have been obvious to provide the insulation package of Wulliman et al. and Cota with

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the ceramic fibers disclosed in Sanocki et al. as part of the film reinforcement region.

The motivation for doing so would have been to make a stronger composite layer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. O'Hara whose telephone number is (571)270-5224. The examiner can normally be reached on Monday thru Friday 10am - 5pm except the first Friday of every Bi-week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael R. Mansen can be reached on (571)272-6608. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B. M. O./

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Examiner, Art Unit 3644

/Tien Dinh/

Primary Examiner, Art Unit 3644